

REMARKS

This Amendment is fully responsive to the non-final Office Action dated October 10, 2208, issued in connection with the above-identified application. Claims 15-28 were previously pending in the present application. With this Amendment, claims 15-22 and 26-28 have been amended; and claim 23 has been canceled without prejudice or disclaimer to the subject matter therein. Accordingly, claims 15-22 and 24-28 are all the claims now pending in the present application. No new matter has been introduced by the amendments made to the claims. Favorable reconsideration is respectfully requested.

To facilitate the Examiner's reconsideration of the application, the Applicants have provided amendments to the specification and the abstract. The changes to the specification and the abstract include minor editorial and clarifying changes. Replacement paragraphs and new abstract are enclosed. No new matter has been introduced by the amendments made to the specification and the abstract.

In the Office Action, claim 27 has been rejected under 35 U.S.C. 101 for allegedly being directed to non-statutory subject matter. Specifically, the Examiner alleges that claim 27 does not define any structural and functional interrelationships between the broadcast receiving program and other claimed elements of a computer which permit the computer broadcast receiving program's functionality to be realized and is thus non-statutory.

The Applicants have amended claim 27 to indicate that the claim is directed to "a computer-readable medium storage medium" that stores a broadcast receiving program. When functional descriptive material is recorded on a computer-readable medium, it becomes structurally and functionally interrelated to the medium and should be considered statutory (see MPEP 2160.01). Accordingly, claim 27, as amended, is directed to statutory subject matter. Withdrawal of the rejection to claim 27 under 35 U.S.C. 101 is respectfully requested.

In the Office Action, claims 15-17 and 23-28 have been rejected under 35 U.S.C. 102(b) as being anticipated by Shikakura et al. (U.S. Patent No. 6,108,379, hereafter "Shikakura"). The Applicants have amended independent claims 15 and 26-28 to help further distinguish the present invention from the cited prior art. For example, independent claim 15 (as amended) recites the following features:

“[a] broadcast receiving apparatus comprising:
a receiver which receives a first TV broadcast signal and a second TV broadcast signal;
a first decoder which decodes the first TV broadcast signal received by said receiver;
a second decoder which decodes the second TV broadcast signal received by said receiver;
a detector which detects a decoding error part of the first TV broadcast signal decoded by said first decoder; and
a synthesizer which generates a composite signal obtained by replacing the decoding error part of the first TV broadcast signal detected by the detector with a corresponding part of the second TV broadcast signal decoded by said second decoder,
wherein the first TV broadcast signal and the second TV broadcast signal are each a digital TV broadcast signal, and the first TV broadcast signal has a content identical to a content of the second TV broadcast signal and provides video of a quality higher than a quality of the second TV broadcast signal.”

The features emphasized above in independent claim 15 are similarly recited in independent claims 26-28. Additionally, the features emphasized above are fully supported by the Applicants' disclosure (see pgs. 9-13; and Figs. 1 and 2).

As amended, independent claims 15 and 26-28 are distinguishable over the cited prior art in that the claims more particularly point out that "the first TV broadcast signal and the second TV broadcast signal are each a digital TV broadcast signal, and the first TV broadcast signal has a content identical to a content of the second TV broadcast signal, and provides video of a quality higher than a quality of the second TV broadcast signal." The features of the present invention discussed above are not believed to be disclosed or suggested by the cited prior art. Additionally, the Applicants maintain that the cited prior art fails to disclose features of independent claims 15 and 26-28, as previously presented.

In the Office Action, the Examiner relies on Shikakura for disclosing or suggesting the features of the present invention, as recited in independent claims 15 and 26-28. However, the Applicants disagree with the Examiner interpretation of Shikakura for at least the reasons noted below.

First, the Examiner considers that the transmission line decoder (2) 204 and the information source decoder (2) 206 shown in Figs. 1 and 7 of Shikakura as respectively corresponding to the first decoder of the present invention, which decodes the first TV broadcast signal received by the receiver.

However, the transmission line decoder (2) 204 and the information source decoder (2) 206 of Shikakura are each adapted to decode the residual bit stream to provide a residual image signal (see col. 8, lines 33-44). The residual bit stream is obtained by extracting only high-frequency components of video signals (see col. 7, lines 45-55).

Accordingly, the residual bit stream (high-frequency components of an image signal) is decoded to provide the residual image signal. The residual image signal and the low-quality image signal (low-frequency components of an image signal) are then synthesized to provide the original image signal. However, an image signal cannot be obtained from the residual bit stream or the residual image signal. Therefore, it is apparent that the residual bit stream or the residual image signal disclosed in Shikakura is not the first TV broadcast signal which has a content identical to a content of the second TV broadcast signal, and provides video of a quality higher than a quality of the second TV broadcast signal.

Therefore, Shikakura does not teach or suggest the first decoder which decodes the first TV broadcast signal having a content identical to a content of the second TV broadcast signal, and providing video of a quality higher than a quality of the second TV broadcast signal, as in the present invention (as similarly recited in independent claims 15 and 26-28).

Second, the Examiner considers that the transmission line decoder (1) 203 and the information source decoder (1) 205 in Figs. 1 and 7 of Shikakura as respectively corresponding to the second decoder of the present invention, which decodes the second TV broadcast signal received by the receiver. Additionally, the Examiner considers the bit error amount detecting circuit 211 and the bit error position detecting circuit 212 in Figs. 1 and 7 of Shikakura as respectively corresponding to the detector, which detects a decoding error part of the first TV broadcast signal decoded by the first decoder.

However, the bit error amount detecting circuit 211 of Shikakura is adapted to determine the bit error rate based on the results of the decoding process carried out by the

transmission line decoder (1) 203, which serves as the second decoder (see col. 4, lines 51-55). Accordingly, Shikakura does not teach or suggest a detector which detects a decoding error part of the first TV broadcast signal decoded by the first decoder.

Further, the bit error position detecting circuit 212 is adapted to detect the position of the error in the residual bit stream of the transmission line decoder (2) 204, and to control the band synthesis unit 215 not to synthesize the residual image signal (see col. 9, lines 8-13). The residual bit stream is obtained by extracting only high-frequency components of the image signal (see col. 7, lines 45-55). Thus, the residual bit stream (high-frequency component of the image signal) is decoded to provide the residual image signal. The residual image signal and the low-quality image signal (low-frequency component of the image signal) are then synthesized to provide the original image signal.

Accordingly, the image signal cannot be obtained from the residual bit stream or the residual image signal. Therefore, the residual bit stream or the residual image signal disclosed in Shikakura is not the first TV broadcast signal which has a content identical to a content of the second TV broadcast signal, and provides video of a quality higher than a quality of the second TV broadcast signal. To this end, Shikakura does not teach or suggest a detector which detects a decoding error part of the first TV broadcast signal decoded by the first decoder, as in the present invention (as similarly recited in independent claims 15 and 26-28).

Third, the Examiner considers the band synthesis unit 215 shown in Fig. 7 of Shikakura as corresponding to the synthesizer of the present invention, which generates a composite signal obtained by replacing the decoding error part of the first TV broadcast signal detected by the detector with a corresponding part of the second TV broadcast signal decoded by the second decoder.

However, the band synthesis unit 215 of Shikakura is adapted to synthesize the low-quality image signal (low-frequency components of the image signal) and the residual image signal (high-frequency components of the image signal) (see col. 8, lines 44-51). The low-quality image signal and the residual image signal exist even after the synthesis. Therefore, it is not possible for the residual image signal to be replaced with the low-quality image signal,

causing the disappearance of the residual image signal as well as the existence of the low-quality image signal only.

Accordingly, Shikakura does not teach or suggest the synthesizer which generates a composite signal obtained by replacing the decoding error part of the first TV broadcast signal detected by the detector with a corresponding part of the second TV broadcast signal decoded by the second decoder, as in the present invention (as similarly recited in independent claims 15 and 26-28).

Based on the above discussion, Shikakura fails to anticipate or render obvious the features recited in independent claims 15 and 26-28. Likewise, Shikakura fails to anticipate or render obvious the features recited in claims 16, 17, 24 and 25 at least by virtue of their dependencies from independent claim 15.

In the Office Action, claim 18 has been rejected under 35 U.S.C. 103(a) as being unpatentable over Shikakura in view of Hatabu et al. (U.S. Publication No. 2005/0117643, hereafter “Hatabu”) and claims 19-22 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Shikakura in view of Karaoguz et al. (U.S. Publication No. 2005/0066089, hereafter “Karaoguz”).

Claims 18-22 depend from independent claim 15. As noted above, Shikakura fails to disclose or suggest all the features recited in independent claim 15. Additionally, Hatabu and Karaoguz fail to overcome the deficiencies noted above in Shikakura. Thus, no combination of Shikakura with either Hatabu or Karaoguz would result in, or otherwise render obvious, claims 18-22 at least by virtue of their dependencies from independent claim 15.

In light of the above, the Applicants respectfully submit that all the pending claims are patentable over the prior art of record. The Applicants respectfully request that the Examiner withdraw the rejections presented in the outstanding Office Action, and pass the present application to issue.

Respectfully submitted,

Tsuyoshi ISOMURA et al.

/Mark D. Pratt/

By. 2009.01.12 14:50:25 -05'00'

Mark D. Pratt

Registration No. 45,794

Attorney for Applicants

MDP/ats
Washington, D.C. 20006-1021
Telephone (202) 721-8200
Facsimile (202) 721-8250
January 12, 2009